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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,396	03/12/2004	Setsuo Kajiwara	2004-0409	6058

7590 09/11/2006

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EXAMINER

WYSZOMIERSKI, GEORGE P

ART UNIT PAPER NUMBER

1742

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,396

Applicant(s)

KAJIWARA ET AL.

Examiner

George P. Wyszomierski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/26/06 (Election).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 6/4/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/12/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Applicant's election without traverse of claims 1-5 in the reply filed on July 26, 2006 is acknowledged. Acknowledgement is made of receipt of a certified copy of Japanese application no. 024653/1997, to which the present application claims priority.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Homma (U.S. Patent 4,919,177).

Homma discloses a Ti-Ni alloy containing slightly more than a 50-50 atomic ratio of titanium to nickel, i.e. it is a reasonable assumption that the Homma alloys deviates from a stoichiometric composition by an amount specified in the instant claims. Critical to the Homma invention is the fact that crystal orientations of the Homma alloys are arranged in a specific direction, i.e. the crystals of the Homma alloys have an identical orientation.

Homma does not explicitly teach the crystal size or diameter, crystal grain diameter or number of crystals with identical orientation as recited in the present claims. However, one of ordinary skill in the art at the time of the invention would have expected these features to be present in the Homma alloys, given that the Homma alloys are of the same composition and crystal orientation as those of the invention. It has been held that where the claimed and prior art products are identical or substantially identical in structure or composition or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established; see *In re Best* (195 USPQ 430, CCPA 1977). Also, where

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the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not; see *In re Spada* (15 USPQ 2d 1655, Fed.Cir. 1990).

Thus, the Homma disclosure is held to establish a prima facie case of obviousness of the presently claimed invention.

4. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muddle et al. (U.S. Patent 5,547,633).

Muddle discloses Ti-Al alloys having a nominal composition of Al-6Ti-1.5Ni, but varying from this so as to contain 80-96 Al and 4-20 Ti, i.e. Muddle discloses alloys that vary from stoichiometric by an amount as presently claimed. The microstructure of the Muddle alloys includes a fine scale (<100 nm) and uniform distribution of mostly cuboidal intermetallic dispersoids in an μ -Al matrix phase. Muddle teaches that the prior art alloy contains an "identity orientation" following a single relationship (see Muddle column 4, lines 30-33), which encompasses the presently claimed identical orientation.

Muddle does not explicitly teach the number of oriented crystals as presently claimed, or the diameter of crystals or crystal grain diameter as presently claimed. However,

a) With respect to the number of oriented crystals, one of ordinary skill in the art at the time the invention was made would have considered the invention obvious because the alloy composition taught by the reference (i.e. Ti-Ni alloy having excess Ti) overlaps the alloy composition recited in the claims and therefore one of ordinary skill in the art would expect that the products taught by the references would be the same as applicant's claimed product, including the precise number of oriented crystals, see MPEP 2112.01.

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b) With respect to the crystal diameter or crystal grain diameter, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy taught by the reference has a crystal grain size which overlaps the crystal grain size in the instant claims. In view of the fact that crystal grains contain crystals and the size of the crystal grains overlap the instant claims, it follows that the diameter of the crystals in the crystal grains would also overlap between the Muddle products and those of the invention.

Thus, a prima facie case of obviousness is established between the disclosure of Muddle et al. and the presently claimed invention.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Wyszomierski whose telephone number is (571) 272-1252. The examiner can normally be reached on Monday thru Friday from 8:00 a.m. to 4:30 p.m. Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached on (571) 272-1244. All patent application related correspondence transmitted by facsimile must be directed to the central facsimile number, (571)-273-8300. This Central FAX Number is the result of relocating the Central FAX server to the Office's Alexandria, Virginia campus.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


GEORGE WYSZOMIERSKI
PRIMARY EXAMINER
GROUP 1700

GPW
September 1, 2006